

TRANSFORMING MEDICINE, IMPROVING LIVES



Education

Tomorrow's medicine will be beyond treating diseases. It will also be about leading the fight against diseases much before the symptoms appear, developing new healthcare innovations, new healthcare systems and promoting healthier lifestyles and choices.

This integrated approach based on the education model of Duke University's renowned School of Medicine, combines academic learning, clinical experience, and clinical and translational sciences research.

Key distinguishing features:

- Basic sciences and basic clinical skills in Year 1
- Core clerkships in Year 2
- Advanced clinical training in Years 3 and 4
- Dedicated time for independent scholarship and research

We offer programmes that lead to:

- Doctor of Medicine (MD)
- MD/PhD
- PhD in Integrated Biology and Medicine
- PhD in Biostatistics and Bioinformatics
- PhD in Clinical Sciences.

Medical students enter with at least a baccalaureate degree in any field except medicine, and are conferred a joint MD degree from Duke University and the National University of Singapore (NUS) when they graduate.

Annual Students' Fees (AY 2020/2021)

Singapore Citizens	S\$47,050 (GST subsidy provided)
Singapore Permanent Residents	S\$56,250 (GST subsidy provided)
International Students	S\$69,000 (inclusive of GST)

Updated: March 2020

Scholarships and bursaries are available for the majority of students to help defray the costs of training. In addition, there is a four-year service obligation for local students and five-year service obligation for international students.

This is why our innovative curriculum, 'Clinician First, Clinician Plus', incorporates and champions additional elements of healthcare practice such as patient safety, quality improvement, systems thinking and healthcare leadership, going well beyond the traditional medical curricula staples of biochemistry, physiology, human anatomy, pathology, and pharmacology.



Our Students

Successful student applicants typically have entrance Medical College Admissions Test (MCAT) scores of over 511 and GPAs over 3.6. 70% of matriculates are from Singapore and 30% are from more than 20 countries, many of whom are from top universities around the world.

Student Performance

Our graduates have gone on to obtain competitive residency spots, published more than 500 journal articles as students, and have assumed roles as Chief Resident. Post residency, our graduates have taken up positions such as Associate Consultant and Clinical Entrepreneur-in-Residence.



A Duke-NUS innovation that shapes the future of medical education

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|----------------|--|
| Learn | Students do self-directed learning and review core content before they come to class. |
| Engage | Students work in teams to engage in problem-solving, for an active learning environment. |
| Apply | With core concepts covered, students apply their knowledge to solve practical applications of the core content. |
| Develop | Students develop critical and creative thinking skills which enable them to be future leaders who will improve the practice of medicine. |

TeamLEAD has been adopted in several schools in Singapore due to its innovative approach to education. We are currently training teachers directly and indirectly using this methodology.

Research

Research is an intrinsic part of being one of the top medical schools in the world. At Duke-NUS, faculty staff and students are given access to some of the world's most sophisticated biomedical research facilities. We adopt a multi-faceted and multi-disciplinary approach, leveraging state-of-the-art technology platforms that are opening up new horizons for research. This has led to a number of significant research discoveries.

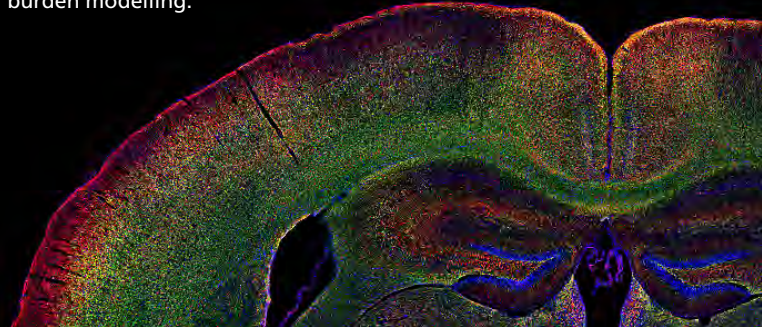
Under the SingHealth Duke-NUS Academic Medicine partnership, Duke-NUS also undertakes clinical research at affiliated hospitals, clinics and specific research sites. It also supports clinical research by providing senior disease experts and senior quantitative experts as part of mentoring teams. The affiliated Singapore Clinical Research Institute also provides full scientific collaboration and guidance in protocol design, execution analysis and publication for investigators.

Signature Research Programmes (SRPs)

Duke-NUS is home to five world-class SRPs:

- Cancer and Stem Cell Biology (CSCB)
- Cardiovascular and Metabolic Disorders (CVMD)
- Emerging Infectious Diseases (EID)
- Health Systems and Services Research (HSSR)
- Neuroscience and Behavioural Disorders (NBD)

All our SRPs are laboratory-based, except for HSSR, which is oriented towards public health policy with an emphasis on health economics, decisions sciences and disease prevalence/ health burden modelling.



Our Centres

In addition to our five SRPs, we have nine centres that further integrate and enhance research and learning at Duke-NUS.

Centre for Ageing Research and Education (CARE)

CARE provides translatable research evidence to support population ageing initiatives in Singapore and the region. It also spearheads educational programmes to build competencies in ageing amongst researchers, policymakers and programme professionals.

Centre for Computational Biology (CCB)

Apart from providing expertise in computational biology and bioinformatics, CCB investigators are especially adept at integrated analyses for genomics studies and systems biology approaches.

Centre for Clinician Scientist Development (CCSD)

CCSD coordinates mentoring efforts, provides personalised career guidance, and organises structured training to nurture budding clinician scientists through improving their research and leadership skills.

Centre of Regulatory Excellence (CoRE)

CoRE aims to support the fast growing biomedical industry in the Asia-Pacific region, through the promotion of regulatory leadership, policy innovation in science and scientific excellence.

Centre for Quantitative Medicine (CQM)

Made up of quantitative scientists in the medical field, CQM serves as a point of contact for biomedical researchers from Duke-NUS partners requiring quantitative expertise.

Centre for Technology & Development (CTeD)

CTeD facilitates translation of research arising from the activities of Duke-NUS and its partners into commercial application. It aims to establish sustainable, long-term relationships with external private and public partners to provide long-term value to Singapore's biomedical research ecosystem.

Centre for Vision Research (CVR)

CVR is a cross-institution centre between Singapore National Eye Centre, Singapore Eye Research Institute and Duke-NUS. The centre aims to holistically address all areas of vision disorders, from discovery biology to late-stage translational research, with direct clinical impact being a top priority.

Lien Centre for Palliative Care (LCPC)

The first of its kind in Asia, LCPC's goal is to build a strong pool of palliative healthcare professionals to enhance service delivery through innovative training programmes and research.

Pre-Hospital and Emergency Research Centre (PERC)

Established through a collaboration between Duke-NUS, the Unit for Prehospital Emergency Care of the Ministry of Health Singapore, SingHealth Duke-NUS Emergency Medicine Academic Clinical Programme and the Ministry of Home Affairs Singapore Civil Defence Force, PERC aims to elevate Singapore's pre-hospital emergency care system. The experts focus on the development of strategies to better integrate pre-hospital, in-hospital, and community care by applying robust research techniques to real-world clinical data.

Research Collaborations

Our faculty members actively collaborate with academic and healthcare institutions, government organisations, and pharmaceutical and biotechnology companies, both locally and internationally. These include:

- SingHealth Group
- A*STAR
- DSO National Laboratories
- Duke University
- GlaxoSmithKline
- Janssen
- Ministry of Health
- National University of Singapore
- Visterra

Academic Medicine

The SingHealth and Duke-NUS Academic Medicine partnership builds on the collective strengths of Duke-NUS' medical education and research capabilities, and SingHealth's clinical expertise. Our Academic Medicine efforts are enhanced by the Academic Clinical Programmes and joint institutes which facilitate the growth and development of scientists and educators within the SingHealth Duke-NUS family.

Through this dynamic collaboration model, clinician researchers work closely with scientists while clinician educators mentor medical students and healthcare learners. All these bring new discoveries from bench to bedside and build pipelines of outstanding Academic Clinicians who can transform medicine and improve lives.



Academic Clinical Programmes (ACPs)

ACP is an integrated framework designed to support our vision towards Academic Medicine. 15 ACPs are created for each clinical speciality for the benefit of our students. These harness the expertise of each discipline across SingHealth and Duke-NUS for greater synergy in clinical care, education and research.

- Anaesthesiology and Perioperative Sciences
- Cardiovascular Sciences
- Emergency Medicine
- Family Medicine
- Medicine
- Musculoskeletal Sciences
- Neuroscience
- Obstetrics and Gynaecology
- Oncology
- Ophthalmology and Visual Sciences
- Oral Health
- Paediatrics
- Pathology
- Radiological Sciences
- Surgery

SingHealth Duke-NUS Joint Institutes & Centres

Through Joint Institutes and Centres, we invest in translational and clinical research platforms to deliver world-class scientific discoveries. Our researchers and clinician-scientists work together to find solutions for preventing and treating diseases relevant to the region.

- Academic Medicine Education Institute (AM•EI)
- Academic Medicine Research Institute (AMRI)
- Health Services Research Institute (HSRI)
- Infectious Diseases Research Institute (IDRI)
- Institute for Patient Safety & Quality (IPSQ)
- Institute of Precision Medicine (PRISM)
- Joint Centre for Technology and Development (Joint-CTeD)
- National Cancer Research Institute Singapore (NCRIS)
- National Dental Research Institute Singapore (NDRIS)
- National Heart Research Institute Singapore (NHRIS)
- National Neuroscience Research Institute Singapore (NNRIS)
- SingHealth Duke-NUS Global Health Institute (SDGHI)
- Translational Immunology Institute (TII)
- Viral Research and Experimental Medicine Centre (ViREMICS)

SingHealth Duke-NUS Disease Centres (SDDCs)

SDDCs focus on disease-based outcomes that will benefit from multi-disciplinary coordination for training, research and clinical service. They enable patients to receive holistic care from a broader base of healthcare professionals without the need to travel to multiple institutions. The integrated care will be enhanced further through deeper and targeted research and education collaborations.

- SingHealth Duke-NUS Blood Cancer Centre
- SingHealth Duke-NUS Breast Centre
- SingHealth Duke-NUS Diabetes Centre
- SingHealth Duke-NUS Head and Neck Centre
- SingHealth Duke-NUS Liver Transplant Centre
- SingHealth Duke-NUS Lung Centre
- SingHealth Duke-NUS Sleep Centre
- SingHealth Duke-NUS Sports & Exercise Medicine Centre
- SingHealth Duke-NUS Transplant Centre

Singapore's only graduate-entry medical school

Duke-NUS Medical School (Duke-NUS) was established in 2005 as a landmark collaboration between two world-ranking institutions of higher education: Duke University and the National University of Singapore, with the objective of providing innovative education and impactful research to enhance the practice of medicine in Singapore. As a graduate-entry medical school, we admit more mature students with significant academic and life experiences.

Clinician First, Clinician Plus

Our MD curriculum is designed to provide an opportunity for our students to become outstanding clinicians and curious, critical thinkers who may also contribute to medicine as researchers, educators, leaders, entrepreneurs or policy makers. This is the basis of our "Clinician First, Clinician Plus" curriculum.

Research-centric

We are a research-intensive medical school with distinguished scientists transforming the way we understand, diagnose and treat diseases. Our world-class signature research programmes are aligned to critical areas of public health needs in Singapore. These disease-focused, multi-disciplinary programmes have facilitated research discoveries with the impact and potential to enhance the lives of patients in Singapore and beyond.

Academic Medicine

Duke-NUS and SingHealth have established a strategic and mutually beneficial partnership in Academic Medicine (AM). Through the SingHealth Duke-NUS Academic Medical Centre (AMC), a collaborative model built on similar successful concepts applied in academic medical centres across the world, we harness the collective strengths of Duke-NUS' medical education and research capabilities, and SingHealth's clinical expertise. This integration of clinical care, education and research leads to improved healthcare and patient outcomes. The AMC works in tandem with students and staff to nurture a vibrant environment that encourages new discoveries in healthcare.

Innovation & Entrepreneurship

We also aim to nurture outstanding healthcare innovators by fostering an innovation ecosystem through the Office of Innovation and Entrepreneurship (OIE). The Centre for Technology & Development (CTeD), under the OIE, manages intellectual property (IP) generated by the researchers and faculty at Duke-NUS, working to ensure optimal commercial outcomes for Duke-NUS inventions.



Centre for Technology & Development (CTeD): nurture, develop and commercialise Duke-NUS IP

CTeD's primary mandate is to manage the identification, protection and commercial development of selected intellectual property (IP) generated within Duke-NUS. However, it also seeks to connect organisations, technologies and people to facilitate relationship-building among all stakeholders. CTeD's activities include:

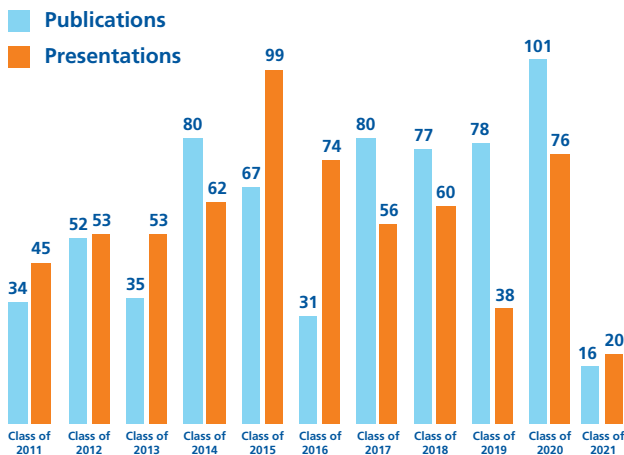
- IP Strategy Development
- Lab-Based Validation
- Project Management
- Market Analysis
- Team Building
- Project Review and Brainstorming

Some of the start-ups licensed by CTeD

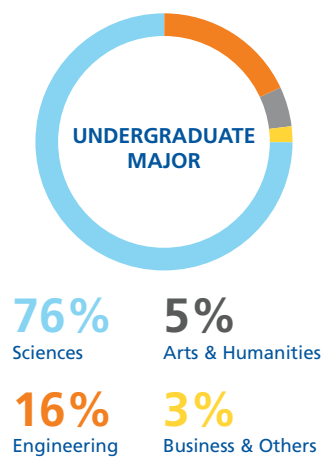
- CognaLearn Pte. Ltd.
- Enleofen Bio, Pte. Ltd.
- Evecxia Inc.
- Mogrify Ltd
- Neurobit Technologies Pte. Ltd.
- Travecta Pte. Ltd.
- Vanteres Pte. Ltd.
(formerly Babynostics)

DUKE-NUS AT A GLANCE

STUDENT PUBLICATIONS AND PRESENTATIONS



STUDENTS' ACADEMIC BACKGROUND



TOP RESIDENCY SPECIALTIES



OUR RESEARCH COMMUNITY PUBLISHED

>6,500

PAPERS IN INTERNATIONAL PEER-REVIEWED JOURNALS



>1,500

FULL-TIME AND ADJUNCT FACULTY IN RESEARCH AND EDUCATION



>\$588 MILLION
IN RESEARCH FUNDING
LOCALLY AND OVERSEAS



47 MOH NMRC
TRANSITION AWARDS*



46 MOH NMRC
CLINICIAN SCIENTIST AWARDS*

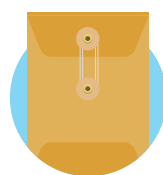


10 MOH NMRC
SINGAPORE TRANSLATIONAL RESEARCH (STAR) INVESTIGATOR AWARDS*



>170

SYNERGISTIC RESEARCH ALLIANCES



149

NEW PATENT FILINGS



22

LICENSING AGREEMENTS EXECUTED



73

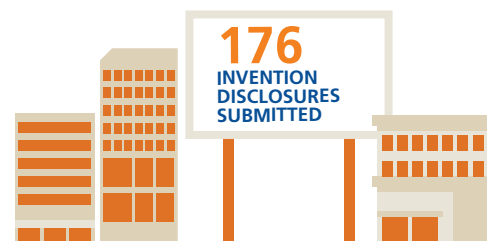
PATENTS AWARDED



3 NATIONAL RESEARCH FOUNDATION INVESTIGATORSHIPS



7 NATIONAL RESEARCH FOUNDATION FELLOWSHIPS



176
INVENTION DISCLOSURES SUBMITTED

16 START-UP

COMPANIES



BY DUKE-NUS INVESTIGATORS

All information accurate as of 31 August 2020, unless stated otherwise.

*Duke-NUS faculty and faculty holding primary academic appointments at Duke-NUS

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All information accurate as of 31 August 2020, unless stated otherwise.



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